UNITED STATES PATENT AND TRADEMARK OFFICE

40

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,017	01/25/2001	Masayoshi Kobayashi	P/2291-98	5189

7590 07/25/2005

Steven I. Weisburd
DICKERSON SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of Americas
41st Floor
New York, NY 10036-2714

EXAMINER	
PHAM, HUNG Q	
ART UNIT	**PAPER NUMBER**
2162	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/770,017
Filing Date: January 25, 2001
Appellant(s): KOBAYASHI, MASAYOSHI

Joseph W. Ragusa Reg. No. 38,586
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of Americas
41st Floor
New York, NY 10036-2714
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/23/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims rejected: 7, 10, 14, 22, 24-27 and 29.

This appeal involves claim 7, 10, 14, 22, 24-27 and 29.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 7, 10, 14, 20, 22, 24-27 and 29 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,404,513	Powers et al.	4-1995
6,633,879 B1	Jeffries	10-2003

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 10, 14, 22, 24-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers et al. [USP 5,404,513] in view of Jeffries [USP 6,633,879 B1].

Regarding claims 24-27, Powers teaches a method, system and program for retrieving data by constructing a data structure in which items of data are stored (Powers, Abstract), comprising:

forming an assumed tree structure in which all the items of data are stored (as shown in FIG. 4, Col. 4, Line 50-Col. 5, Line 12, a summary tree includes a root node and dimension nodes as *an assumed tree structure* for storing *all the items of data* of detail table 30 is *formed*);

sequentially selecting a node from the assumed tree structure to select a sub-tree structure including the selected node and any child nodes of the selected node; forming an equivalent table storing at least a portion of the items of data included in the selected sub-tree structure in a table form; replacing the selected sub-tree structure with the equivalent table to construct the data structure (Col. 6, Lines 17-37, as taught by Powers, tables can be used to represent the summary tree, wherein a single row table is used to represent the root node, and a two-dimensional table containing summary information and pointers to tables representing child dimension nodes is used to represent a dimension node 128 and its child. As seen, to

represent summary tree in the form of table, root *node* or dimension *node* from the summary tree as *the assumed tree structure* for having *a sub-tree structure including the selected node and any child nodes of the selected node* is *sequentially selected*, a table containing summary information and pointers as *an equivalent table storing at least a portion of the items of data included in the selected sub-tree structure* is *formed*, and the root node or dimension node is replaced by the table to construct a new data structure as in FIG. 7);

The missing of Powers is the step of ***determining whether the selected sub-tree structure satisfies one or more predetermined condition; wherein the predetermined conditions are that: 1) an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is smaller than that required to store the assumed tree structure; and 2) search performance of the data structure is not lower than that of the assumed tree structure***, and performing the step of replacing ***when the selected sub-tree structure satisfies the one or more predetermined conditions***. However,

<u>if condition (1) is taken to perform the step of replacing with respect to claims 24, 25, 26 and 27</u>

There is no need of determining whether the selected node satisfies the condition (1) for Powers technique, because ***an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is*** always ***smaller than that required to store the assumed tree structure*** (any data structure is used to store the table, its size is always smaller than the summary tree, because the table contains only part of the summary tree information. Therefore, that data structure contains less information than the whole tree). Thus, the summary tree of Powers can be represented using

tables without the need of determining the memory space, and Powers technique still meets the requirement of the claimed invention of claims 24, 25, 26 and 27.

if condition (2) is taken to perform the step of replacing with respect to claims 24, 25, 26 and 27

Jeffries teaches different combinations of table and tree may be used to meet system requirement for space and speed (Jeffries, Col. 3, Lines 5-15). Jeffries further discloses the technique of determining the speed of access for a table (Jeffries, Col. 8, Line 48-Col. 9, Lines 6), speed of access for a tree (Jeffries, Col. 9, Lines 23-45) and speed of access of a combination of table and tree (FIG. 5A, step 154). Jeffries also teaches that storing as many items in table as possible would optimize the speed (Jeffries, Col. 9, Lines 61-62). However, table and tree may be implemented in different memories. Therefore, a careful comparison of the speeds of access with respect to table and tree should be performed in order to provide the optimal speed to build the combination of table and tree (Jeffries, Col. 9, Line 59-Col. 10, Lines 8).

Referring back to Powers technique, the speed of access of the summary tree can be calculated as suggested and taught by Jeffries. In order to represent the tree by tables as taught by Powers at Col. 6, Lines 17-37, root node and dimension node is sequentially selected for replacing with a corresponding table, and before replacing, the speed of access of a

combination of table and tree can be calculated, and comparing with the speed of summary tree as suggested by Jeffries. If the speed of the combination of table and tree is an optimal speed, the corresponding table replaces the selected node. By combining the Jeffries technique into Powers technique, system performance is always optimized regardless of memory that used to implement the data structure.

Regarding claim 29, Powers teaches a method, system and program for retrieving data by constructing a data structure in which items of data are stored (Powers, Abstract), comprising:

forming an assumed tree structure in which all the items of data are stored (as shown in FIG. 4, Col. 4, Line 50-Col. 5, Line 12, a summary tree includes a root node and dimension nodes as *an assumed tree structure* for storing *all the items of data* of detail table 30 is *formed*);

sequentially selecting a node from the assumed tree structure to select a sub-tree structure including the selected node and any child nodes of the selected node; forming an equivalent table storing at least a portion of the items of data included in the selected sub-tree structure in a table form; replacing the selected sub-tree structure with the equivalent table to construct the data structure (Col. 6, Lines 17-37, as taught by Powers, tables can be used to represent the summary tree, wherein a single row table is used to represent the root node, and a two-dimensional table containing summary information and pointers to tables representing child dimension nodes is used to represent a dimension node 128 and its child. As seen, to represent summary tree in the form of table, root *node* or dimension *node* from the

summary tree as *the assumed tree structure* for having *a sub-tree structure including the selected node and any child nodes of the selected node* is *sequentially selected*, a table containing summary information and pointers as *an equivalent table storing at least a portion of the items of data included in the selected sub-tree structure* is *formed*, and the root node or dimension node is replaced by the table to construct a new data structure as in FIG. 7);

The missing of Powers is the intended use of the step selecting: ***so as to satisfy the following conditions a) and b): a) an amount of memory required to store the data structure is smaller than that required to store the assumed tree structure; and b) search performance of the data structure is not lower than that of the assumed tree structure.***

Jeffries teaches different combinations of table and tree may be used to meet system requirement for space and speed (Jeffries, Col. 3, Lines 5-15). As illustrated in Jeffries FIG. 2, the cost of table and tree, e.g., in term of memory or speed, is determined to meet a predefined parameter. Jeffries teaches the method of calculating the cost of a table in term of memory (Jeffries, Col. 6, Lines 38-50), the cost of a tree in term of memory (Jeffries, Col. 7, Lines 20-26), and the cost of table and tree in term of memory (Jeffries, Col. 6, Lines 1-16). Jeffries further discloses the technique of determining the speed of access for a table (Jeffries, Col. 8, Line 48-Col. 9, Lines 6), speed of access for a tree (Jeffries, Col. 9, Lines 23-45) and speed of access of a combination of table and tree (FIG. 5A, step 154). Jeffries also teaches that storing as many items in table as possible would optimize the speed (Jeffries, Col. 9, Lines 61-62). However, table and tree may be implemented in different memories. Therefore, a careful comparison of the speeds of access with respect to table and tree should be

performed in order to provide the optimal speed to build the combination of table and tree (Jeffries, Col. 9, Line 59-Col. 10, Lines 8). Thus, in term of memory, the Jeffries process of FIG. 2 indicates condition (a) ***an amount of memory required to store the data structure is smaller than that required to store the assumed tree structure*** (desired parameter of FIG. 2 is the calculated memory cost of the tree). In term of speed or search performance, the Jeffries FIG. 2 also indicates condition (b) ***search performance of the data structure is not lower than that of the assumed tree structure*** (desired parameter of FIG. 2 is the calculated search performance of the tree).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to use the technique of representing the tree using table for satisfying memory usage and search performance conditions as taught by Jeffries in order to optimize the system performance in term of memory and speed.

Regarding claims 7, 10, 14, 22, Powers and Jeffries teaches all the claimed subject matters as discussed in claims 24-27, and as discussed in claims 24-27,

- There is no need of determining whether the selected node satisfies the required memory of condition as further defined in condition (2), because ***an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is*** always ***smaller than that required to store the assumed tree structure*** (whatever data structure is used to store the table, its size is always smaller than the summary tree, because the table contains only part of the summary tree information, therefore less information than the whole tree). Thus,

the summary tree can be represented using tables without the need of determining as claimed, and Powers technique meets the requirement of the claimed invention of claims 24, 25, 26 and 27.

- if condition (1) is further defined by a maximum search time to perform the step of replacing

  Jeffries teaches different combinations of table and tree may be used to meet system requirement for space and speed (Jeffries, Col. 3, Lines 5-15). Jeffries further discloses the technique of determining the maximum speed of access for a table (Jeffries, Col. 8, Line 48-Col. 9, Lines 6), maximum speed of access for a tree (Jeffries, Col. 9, Lines 23-45). Jeffries also teaches that storing as many items in table as possible would optimize the speed (Jeffries, Col. 9, Lines 61-62). However, table and tree may be implemented in different memories. Therefore, a careful comparison of the speeds of access with respect to table and tree should be performed in order to provide the optimal speed to build table and tree (Jeffries, Col. 9, Line 59-Col. 10, Lines 8).

As seen, because condition required memory is always satisfied, only condition search performance is considered, and obviously, the Jeffries teaching of comparing the speed between the table and tree before replacing the summary tree with tables could be applied. And by combining the Jeffries technique into Powers technique, system performance is always optimized by comparing the search performance to implement the data structure.

Allowable Subject Matter

Claims 8, 11, 15 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 8, 11, 15 and 23, Powers and Jeffries also teaches a method for controlling storage and retrieval of data. However, Powers and Jeffries fail to teach or suggest ***a decision on whether the condition (1) is satisfied is made depending whether the following equation is satisfied:***

$N_D \leq N_L \times K$, *when* $K = T_e / T_n$

where N_D ***is the number of items of data included in the selected sub-tree structure,*** N_L ***is the number of levels of selected node or lower in the assumed tree structure,*** T_n ***is search time per node, and*** T_e ***is search time per entry in the equivalent table.***

(11) Response to Argument

As argued by appellants

(1) at page 7:

Both the teaching or suggestion to make the proposed combination, and the reasonable expectation of success, must be found in the prior art, not in Applicants disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also MPEP §2143.

Further, the fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so," Id. at 682. See also MPEP §2143.01.

As such, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. WL. Gore 'Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). See MPEP §2141.02.

(2) at pages 8 and 9:

... the Examiner has failed to identify any teaching or suggestion in the prior art of determining whether to make a substitution of an equivalent table for a sub-tree in an assumed tree structure based upon criteria 2), i.e., that the search performance of the data structure after the substitution is not lower than that of the assumed tree structure. In particular, at page 6 of the Final Office Action, the Examiner appeared to concede that the primary reference Powers contains no teaching relating to determining whether to substitute an equivalent table for a sub-tree based on the search performance criteria of precondition 2). The Examiner took the position that Jeffries, at col. 9, lines 23-45, supplies this feature. Appellant respectfully disagrees.

The portion of Jeffries relied upon by the Examiner simply shows that it is possible to determine the speed of access for a tree by determining the maximum and minimum depths of the corresponding trees. Even when the cited disclosure of Jeffries is combined with Powers, there is no teaching of determining whether to substitute an equivalent table for a sub-tree based upon whether the search performance of the data structure after the substitution is not lower than that of the assumed tree structure. For at least this reason, no prima facie case of obviousness has been set forth against independent claims.

(3) at page 9:

Precondition 1) of all of the independent claims requires a determining step in which a substitution will only be made once it has been determined that an amount of memory required to store the data structure is smaller than that required to store the assumed tree structure. In the Final Office Action, the position was taken that Powers teaches determining whether to make a substitution of an equivalent table for a sub-tree in an assumed tree structure based upon this claimed criteria. Appellant respectfully disagrees.

(4) at pages 9 and 10:

... Appellant disagrees that the process of Powers is equivalent to the claimed process.

First, the technique discussed in Powers is not the same as the claimed technique. In Powers it is the existence of redundancy that determines whether the node-sharing technique is used, that is, whether or not a single summary node is used to replace two identical summary nodes. If redundancy is found, a single node is used instead of using the two identical nodes. Powers contains no teaching whatsoever that any

determination is made as to whether the replacement should be made based upon whether, once the replacement is made, the structure formed thereby would reduce the amount of memory used by the tree.

In fact, Powers' replacement of redundant summary nodes by a single shared summary node always results in a reduction of memory utilization. It therefore would make no sense for Powers to include a step of determining whether an amount of memory required to store the summary tree without the elimination of redundancy would be greater than the amount of memory required to store the summary tree if redundancy has been eliminated. Such a determination would be completely unnecessary, and would never be performed. Nor, for the same reason, would there be any motivation to modify Powers to add such an unnecessary step.

(5) at page 10:

On the other hand, in the invention defined by the independent claims, substitution of the sub-tree with an equivalent may or may not meet both of the conditions 1) and 2), for example on the basis of the formula discussed above. Thus, in the invention of the independent claims, it is not a certainty that the data structure formed with the substituted equivalent table would take up less memory and/or reduce search time in comparison to the assumed tree structure that includes the sub-tree. For at least this further reason, no prima facie case of obviousness has been set forth in the Office Action.

(6) at page 11:

In the Final Office Action, the Examiner took the position that in Powers, instead of using nodes for storing information, it would have been obvious to use an a two dimensional table as an equivalent table for at least a portion of the tree. However, Powers provides no motivation to make such a substitution.

... There is no teaching or suggestion in Powers to replace only a portion of an assumed tree structure with an equivalent table.

Examiner respectfully disagrees.

(1) In response to appellants' argument that there is no suggestion to combine the references, examiner respectfully refers appellants to the Jeffries teaching. As taught by Jeffries, different combinations of table and tree may be used to meet system requirement for space and speed (Jeffries, Col. 3, Lines 5-15). Jeffries further

discloses the technique of determining memory cost for a table, a tree and a combination of table and tree (Jeffries, FIG. 4B), determining the speed of access for a table (Jeffries, Col. 8, Line 48-Col. 9, Lines 6), speed of access for a tree (Jeffries, Col. 9, Lines 23-45) and speed of access of a combination of table and tree (FIG. 5A, step 154). Jeffries also teaches that storing as many items in table as possible would optimize the speed (Jeffries, Col. 9, Lines 61-62). However, table and tree may be implemented in different memories. Therefore, a careful comparison of the speeds of access with respect to table and tree should be performed in order to provide the optimal speed to build the combination of table and tree (Jeffries, Col. 9, Line 59-Col. 10, Lines 8). As seen, Jeffries strongly suggests the step of determining the satisfaction of search performance based on comparison for constructing a tree using tables.

(2) In response to appellants' arguments that there is no suggestion with respect to criteria 2, examiner respectfully refers appellants to the Jeffries teaching as discussed above. As suggested by Jeffries, the speed of access of the Powers summary tree should be calculated. In order to represent the tree using tables as taught by Jeffries at Col. 6, Lines 17-37, root node and dimension node is sequentially selected for replacing with a corresponding table, and before replacing, the speed of access of table and tree can be calculated, and comparing with the speed of summary tree as suggested by Jeffries. If the speed of the combination of table and tree is an optimal speed, the corresponding table replaces the selected node.

(3) Claims 24-27 uses either predetermined condition (1) or (2) for replacing a selected node with an equivalent table. Claim 29 uses both of the predetermined condition (1) and (2) for replacing a selected node with an equivalent table.

In response to appellants' arguments with respect to *precondition 1) of all of the independent claims*, examiner respectfully points out that *an amount of memory required to store <u>the data structure</u> is smaller than that required to store the assumed tree structure* relates only to claim 29, and does not relate to the claimed subject matter of claims 24-27.

As recited in claims 24-27, precondition (1) is *an amount of memory required to store <u>a data structure including the equivalent table</u> ... is smaller than that required to store the assumed tree structure*. The data structure as in precondition (1) of claims 24-27 is not the constructed data structure in the limitation *replacing the selected sub-tree structure with the equivalent table <u>to construct the data structure</u>*. Therefore, the argument does not warrant consideration (i.e., the subject matter is not claimed) with respect to claim 24-27.

Regarding claim 29, as illustrated in Jeffries FIG. 2, the cost of table and tree, e.g., in term of memory or speed, is determined to meet a predefined parameter. In term of memory, Jeffries teaches the method of calculating the cost of a table (Jeffries, Col. 6, Lines 38-50), the cost of a tree (Jeffries, Col. 7, Lines 20-26), and the cost of table and tree (Jeffries, Col. 6, Lines 1-16). Thus, in term of memory, the Jeffries process of FIG. 2 indicates condition (a) ***an amount of memory required to store the data structure is smaller than that required to store the assumed tree structure*** (the desired parameter of FIG. 2 is the calculated memory cost of the tree).

(4) The Powers process is equivalent to the claimed process as discussed in the rejection under 35 U.S.C. § 103. The missing of Powers is the step of *determining whether the selected sub-tree structure satisfies one or more predetermined condition; wherein the predetermined conditions are that: 1) an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is smaller than that required to store the assumed tree structure; and 2) search performance of the data structure is not lower than that of the assumed tree structure*, and performing the step of replacing *when the selected sub-tree structure satisfies the one or more predetermined conditions*.

However,

<u>if condition (1) is taken to perform the step of replacing with respect to claims 24, 25, 26 and 27</u>

There is no need of determining whether the selected node satisfies the condition (1) for Powers technique, because *an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is* always *smaller than that required to store the assumed tree structure* (any data structure is used to store the table, its size is always smaller than the summary tree, because the table contains only part of the summary tree information. Therefore, that data structure contains less information than the whole tree). Thus, the summary tree of Powers can be represented using tables without the need of determining the memory space, and Powers technique still meets the requirement of the claimed invention of claims 24, 25, 26 and 27.

<u>if condition (2) is taken to perform the step of replacing with respect to claims 24, 25, 26 and 27</u>

Jeffries teaches different combinations of table and tree may be used to meet system requirement for space and speed (Jeffries, Col. 3, Lines 5-15). Jeffries further discloses the technique of determining the speed of access for a table (Jeffries, Col. 8, Line 48-Col. 9, Lines 6), speed of access for a tree (Jeffries, Col. 9, Lines 23-45) and speed of access of a combination of table and tree (FIG. 5A, step 154). Jeffries also teaches that storing as many items in table as possible would optimize the speed (Jeffries, Col. 9, Lines 61-62). However, table and tree may be implemented in different memories. Therefore, a careful comparison of the speeds of access with respect to table and tree should be performed in order to provide the optimal speed to build the combination of table and tree (Jeffries, Col. 9, Line 59-Col. 10, Lines 8).

Referring back to Powers technique, the speed of access of the summary tree can be calculated as suggested and taught by Jeffries. In order to represent the tree by tables as taught by Powers at Col. 6, Lines 17-37, root node and dimension node is sequentially selected for replacing with a corresponding table, and before replacing, the speed of access of a combination of table and tree can be calculated, and comparing with the speed of summary tree as suggested by Jeffries. If the speed of the combination of table and tree is an optimal speed, the corresponding table replaces the selected node. By combining the Jeffries technique into Powers technique, system performance is always optimized regardless of memory that used to implement the data structure.

Thus, if condition (1) is used, the step of determining *an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is smaller*

than that required to store the assumed tree structure is unnecessary, and obviously, can be bypassed to construct the data structure. If condition (2) is used, the step of determining *search performance of the data structure is not lower than that of the assumed tree structure* as suggested and taught by Jeffries can be used with Powers technique to optimize the system performance.

(5) In response to appellants' arguments that *the substitution may not meet both of the conditions (1) and (2)... it is not a certainty that the data structure formed with the substituted equivalent table...* examiner respectfully points out that this argument does not relate to the claimed subject matter of claims 7, 10, 14, 22, 24-27 and 29, therefore, does not warrant consideration (i.e., the subject matter is not claimed).

(6) In response to appellants' arguments with respect to the Final Action, examiner respectfully points out that the Powers reference, taken as a whole, discloses an equivalent table as discussed above (two-dimensional table). Examiner also respectfully points out that the feature, which appellant relied on for arguing, *no teaching or suggestion in Powers to replace only a portion of an assumed tree structure with an equivalent table*, does not relate to the claimed subject matter of claims 7, 10, 14, 22, 24-27 and 29, therefore, does not warrant consideration (i.e., the subject matter is not claimed).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

HUNG Q PHAM
Examiner
Art Unit 2162

July 21, 2005

Conferees
HOSAIN ALAM, SUPERVISORY PATENT EXAMINER, A.U. 2166.
CHARLES RONES, SUPERVISORY PATENT EXAMINER, A.U. 2164.

Steven I. Weisburd
Joseph W. Ragusa
DICKERSON SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of Americas
41st Floor
New York, NY 10036-2714

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER

C. Rones
CHARLES RONES
Supervisory PRIMARY EXAMINER